

1 WHAT IS CLAIMED IS:

Sub a3 > 1. A method of automatic statistics generation and management, comprising:
2 receiving input data of a sporting event;
3 generating semantic information and geometric model information based on
4 the input data; and
5 generating sporting statistics based on at least one of the semantic information
6 and the geometric information.

Sub b1 > 2. The method according to claim 1, further including storing the sporting statistics.

Sub b2 > 3. The method according to claim 1, further including analyzing the sporting
statistics.

Sub a4 > 4. The method according to claim 1, further including providing the input data from
at least one video camera located at the sporting event.

Sub b1 > 5. The method according to claim 1, further including receiving a query for the
sporting statistics.

Sub a5 > 6. The method according to claim 1, further including:
2 processing the input data to generate tracking information; and
3 processing the tracking information to generate the semantic information and
4 the geometric information.

Sub B2 1
Sub B2 2

7. The method according to claim 1, further including analyzing the sporting statistics to discover patterns and predict future trends.

1 8. The method according to claim 1, wherein the input data is video.

Sub B2 1
Sub B2 2

9. The method according to claim 1, wherein the input data is from a radio frequency (RF) beacon.

1 10. The method according to claim 1, wherein the input data is textual information.

Sub A6 1
Sub A6 2
Sub A6 3
Sub A6 4
Sub A6 5
Sub A6 6
Sub A6 7
Sub A6 8

11. An automatic statistics generation and management system, comprising:
a head-end system to receive input data of a sporting event and to generate semantic information and geometric information;
a statistics generation system to generate sporting statistics based on at least one of the semantic information and the geometric information received from the head-end system; and
a statistics management system to store and manage the sporting statistics received from the statistics generation system.

1 12. The system according to claim 11, further including at least one video camera,
2 located at the sporting event, to provide the input data to the head-end system.

1 13. The system according to claim 11, further including a gateway connected to the
2 statistics management system to support query applications from a user interface.

Sub 1 a7 >
1 14. The system according to claim 11, wherein the head-end system includes:
2 a tracking system to receive and process the input data to generate tracking
3 information; and
4 a production system to receive and process the tracking information to generate
5 the semantic information and the geometric information.

Sub 1 b2 >
1 15. The system according to claim 11, wherein the statistics generation system
2 includes:
3 a model manager to access the semantic information and the geometric
4 information; and
5 a statistics generator to receive and process at least one of the semantic and
6 geometric information from the model manager to generate the sporting statistics.

1 16. The system according to claim 11, wherein the statistics management system
2 includes:
3 a statistics database to store and manage the sporting statistics; and
4 a data miner to extract and analyze the sporting statistics stored in the statistics
5 database.

1 17. The system according to claim 16, wherein the data miner analyzes the sporting
2 statistics to discover patterns and predict future trends.

1 18. The system according to claim 11, wherein the semantic information is an
2 Extended Markup Language (XML) file.

1 19. The system according to claim 11, wherein the sporting statistics are saved in a
2 predefined Extended Markup Language (XML) schema.

1 20. The system according to claim 11, wherein the input data is video.

1 21. The system according to claim 11, wherein the input data is from a radio
frequency (RF) beacon.

1 22. The system according to claim 11, wherein the input data is textual information.

1 Sub
2 a8 23. An automatic statistics generation and management system, comprising:
3 a head-end system including a tracking system to receive and process input data
4 of a sporting event to generate tracking information, and a production system to receive
5 and process the tracking information to generate semantic information and geometric
6 information;
7 a statistics generation system including a model manager to receive and access the
semantic information and the geometric information, and a statistics generator to receive

8 and process at least one of the semantic information and the geometric information to
9 generate sporting statistics; and
10 a statistics management system having a statistics database to store and manage
11 the sporting statistics, and a data miner to extract and analyze the sporting statistics stored
12 in the statistics database.

1 24. The system according to claim 23, further including at least one video camera,
2 located at the sporting event, to provide the input data to the head-end system.

Subj B1
Subj B2
1 25. The system according to claim 23, further including a gateway connected to the
statistics management system to support query applications from a user interface.

Subj B1
Subj B2
1 26. The system according to claim 23, wherein the data miner analyzes the sporting
statistics to discover patterns and predict future trends.

Subj B1
Subj B2
1 27. The system according to claim 23, wherein the input data is video.

Subj B1
Subj B2
1 28. The system according to claim 23, wherein the input data is from a radio
frequency (RF) beacon.

1 29. The system according to claim 23, wherein the input data is textual information.

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B2

30. The system according to claim 23, wherein the sporting statistics are saved in a predefined Extended Markup Language (XML) schema.

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